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MINERAL INDUSTRY SURVEYS

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CHROMIUM IN MAY 1996

Chromite consumption increased slightly in May 1996 compared with that of the previous month's data, according to the U.S. Geological Survey. Net production of chromium ferroalloys and metal in May decreased slightly compared with data for April, and consumption of chromium ferroalloys and metal in May decreased by 28% compared to revised data for April. Chromite stocks increased 8% over the same period. At the May rate of consumption, chromium stocks represented 5 months of domestic supply. Chromium ferroalloys and metals stocks decreased 13% compared with revised data for April. At the May rate of consumption, chromium ferroalloys and metal stocks represented 0.9 months of domestic supply.

Included in this Mineral Industry Surveys are: U.S. consumption and stocks of chromite; U.S. net production, net shipments, and stocks of chromium materials; U.S. consumption by end use and consumer stocks of chromium ferroalloys and metal for May; U.S. Government inventory; and foreign trade for April.

<u>Update</u>:--The Defense National Stockpile Center (DNSC) reported that the 1996 fiscal year Annual Materials Plans (AMP) was revised. The 1996 AMP became effective on April 1, 1996, and identifies the maximum amount of material that may be sold during the plan period (i.e., October 1, 1995, through September 30, 1996). The revised plan calls for the DNSC to dispose of, at most, the following amounts of chromium materials: chemical grade chromite ore, 90,000 tons; metallurgical grade chromite ore, 500,000 tons; refractory grade chromite ore, 90,000 tons; and ferrochromium, 23,000 tons. (Quantities reported here were converted from short tons to metric tons and rounded to two significant figures.) The revised plan increased the upper limit of chemical and metallurgical grade chromite ore available for disposal and left the upper limit of refractory grade chromite ore and chromium ferroalloys unchanged.

The DLA issued a solicitation of offers for chemical and refractory grade chromite ore entitled DLA-Chromite-001. The solicitation describes how a potential buyer can bid on chromite available for sale.

The DLA issued a Solicitation of Offers for ferrochromium entitled DLA-Ferrochromium-001. The DLA plans to sell 25,000 tons of ferrochromium with a bid opening on July 31, 1996.

For further information, contact: Defense National Stockpile Center, 8725 John J. Kingman Road, Suite 3339, Fort Belvoir, VA 22060-6223. Persons may obtain the revised plan by requesting news release DNSC-96-695 from Mr. Peter Roman at (703-767-6490).

TABLE 1 U.S. SALIENT CHROMIUM STATISTICS 1/

(Metric tons, gross weight unless otherwise noted)

	1995		1996		
•	Year total	1st quarter	Apr.	May	Jan May
Production:					
Chromium ferroalloys and metal: 2/					
Net production:					
Gross weight	72,500	18,500	5,480	5,350	29,300
Chromium content	49,500	12,900	3,810	3,710	20,500
Net shipments	72,100	20,800	5,330	4,840	31,000
Stainless steel production 3/	2,030,000	NA	NA	NA	NA
Components of U.S. supply:					
Stainless steel scrap receipts	663,000	162,000	48,600	46,400	257,000
Imports for consumption:					
Chromite ore	253,000	12,700	28,600	NA	41,300 4
Chromium ferroalloys 5/	495,000	109,000	62,700	NA	172,000 4
Chromium metal 6/	7,040	2,520	894	NA	3,420 4
Stainless steel	NA	NA	NA	NA	NA
Stainless steel scrap	43	13	4	NA	17 4
Distribution of U.S. supply:					
Consumption:					
Chromite ore	356,000 7/	95,200	29,600	30,100	155,000
Chromium ferroalloys & metal	283,000	75,500 r/	29,300 r/	21,100	126,000 4
Exports:					
Chromite ore	17,800	5,280	17,100	NA	22,400 4
Chromium ferroalloys	9,360	2,440	734	NA	3,180 4
Chromium metal	714	254	165	NA	419 4
Stainless steel	NA	NA	NA	NA	NA
Stainless steel scrap	368	55	37	NA	92 4
Stocks at end of period:					
Industry:					
Chromite ore:					
Chemical and metallurgical	194,000	143,000	143,000	156,000	XX
Refractory	10,900	9,050	9,050	8,700	XX
Total	205,000	152,000	152,000	165,000	XX
Chromium ferroalloys and metal:					
Producer	8,430	6,190	6,190	6,700	XX
Consumer	10,700	15,400 r/	15,200 r/	11,800	XX
Government Stockpile:					
Chromite ore	1,320,000	1,270,000	1,270,000	1,240,000	XX
Chromium ferroalloys	1,070,000	1,070,000	1,070,000	1,070,000	XX
Chromium metal	7.690	7.690	7,690	7,690	XX

r/ Revised. NA Not available. XX Not applicable.

^{1/} Data are rounded to three significant digits; may not add to totals shown.

^{2/} Includes low- and high-carbon ferrochromium, chromium concentrate, ferrochromium-silicon, chromium metal, and other miscellaneous alloys.

^{3/} Data on stainless steel production from American Iron and Steel Institute, quarterly production of stainless and heat resisting raw steel.

^{4/} Includes data for January through April; May not available at time of publication.

^{5/} Includes high-, medium-, and low-carbon ferrochromium and ferrochromium-silicon.

^{6/} Includes waste and scrap and other.

^{7/} Includes withheld data for February through December.

TABLE 2 U.S. CONSUMPTION, BY END USE, AND CONSUMER STOCKS OF CHROMIUM FERROALLOYS AND METAL IN MAY 1996 1/

(Metric tons, gross weight)

	Ferrochrom	ium				Jan.
		Medium-	Ferro-			through
	Low-	and high-	chromium			May
End use	carbon	carbon	silicon	Other	Total	Total 2/
Steel:						
Carbon	276	308	7	W	591	3,080
Stainless and heat resisting	443	14,400	1,320	W	16,100	94,000
Full alloy	203	1,880	75	W	2,160	11,200
High-strength low-alloy and electric	168	106	475		749	4,110
Tool	W	W		W	W	1,310
Cast irons	W	130	W	W	130	676
Superalloys	184	513		274	971	3,940
Alloys:	_					
Welding materials 3/		1		2	3	14
Other alloys 4/	W	W		65	65	269
Miscellaneous and unspecified	260	(5/)	(5/)	26	287	7,390
Total: 6/ gross weight	1,530	17,300	1,880	367 7.	21,100	XX
Chromium content	933	10,300	671	335	12,300	XX
Stocks, May 31, 1996	1,350	8,480	2,000	(5/)	11,800	XX
Jan. through May: 2/						
Total	7,890	97,700	18,500	1,850 8	/ XX	126,000
Chromium content	5,320	56,800	7,020	1,660	XX	70,800

W Withheld to avoid disclosing company proprietary data; included in "Miscellaneous and unspecified." XX Not applicable.

 ${\bf TABLE~3}$ U.S. GOVERNMENT STOCKPILE INVENTORY 1/ OF CHROMIUM MATERIALS 2/

(Metric tons)

	C	Chromite ore		Chror	Chromium ferroalloys			Chromium metal	
				High-	Low-	_			
				carbon	carbon	Ferro-			
		Metal-	Re-	ferro-	ferro-	chromium	Alumino-	Electro-	
Period	Chemical	lurgical	fractory	chromium	chromium	silicon	thermic	lytic	
1995:									
May	220,000	850,000	338,000	738,000	283,000	52,900	2,670	5,020	
June	220,000	850,000	338,000	738,000	283,000	52,900	2,670	5,020	
July	220,000	835,000	333,000	738,000	283,000	52,900	2,670	5,020	
August	220,000	823,000	333,000	738,000	283,000	52,900	2,670	5,020	
September	220,000	817,000	333,000	738,000	283,000	52,900	2,670	5,020	
October	220,000	792,000	333,000	738,000	283,000	52,900	2,670	5,020	
November	220,000	792,000	333,000	738,000	283,000	52,900	2,670	5,020	
December	220,000	773,000	328,000	738,000	283,000	52,900	2,670	5,020	
1996:									
January	220,000	750,000	328,000	738,000	283,000	52,900	2,670	5,020	
February	220,000	739,000	328,000	738,000	283,000	52,900	2,670	5,020	
March	220,000	722,000	328,000	738,000	283,000	52,900	2,670	5,020	
April	220,000	717,000	328,000	738,000	283,000	52,900	2,670	5,020	
May	220,000	694,000	328,000	738,000	283,000	52,900	2,670	5,020	

^{1/} Includes specification and non-specification grade materials and materials set aside for disposal but not yet shipped.

Source: National Defense Stockpile Center.

^{1/} Data are rounded to three significant digits; may not add to totals shown.

^{2/} Includes revised data from previous months.

^{3/} Includes structural and hard-facing materials.

^{4/} Includes cutting materials and magnetic, aluminum, copper, nickel, and other alloys.

^{5/} Withheld to avoid disclosing company proprietary data.

^{6/} Includes estimates.

^{7/} Includes 297 tons of chromium metal.

^{8/} Includes 1,470 tons of chromium metal.

^{2/} Data are rounded to three significant digits.

 ${\bf TABLE~4} \\ {\bf U.S.~EXPORTS~OF~CHROMITE~ORE,~CHROMIUM~FERROALLOYS~AND~METAL~1/}$

	Chromite	e ore	Chro	mium ferroalloys 2/		Chromium r	netal 3/
	Gross		Gross	Chromium		Gross	
	weight	Value	weight	content	Value	weight	Value
Period	(metric tons)	(thousands)	(metric tons)	(metric tons)	(thousands)	(metric tons)	(thousands)
1995:							
April	2,120	\$333	606	350	\$819	42	\$456
May	2,030	437	932	565	1,170	32	407
June	2,020	321	1,100	648	1,530	49	599
July	1,260	226	635	381	957	69	418
August	1,100	213	685	403	1,070	26	329
September	1,350	294	876	530	1,240	61	652
October	1,140	228	923	560	1,270	42	616
November	1,330	425	591	353	855	48	424
December	1,420	205	528	289	639	157	1,520
Total	17,800	3,430	9,360	5,540	12,500	714	7,820
1996:							
January	1,740	427	885	519	1,120	86	1,000
February	1,700	407	887	536	1,230	44	618
March	1,840	484	669	399	894	124	1,450
April	17,100	2,280	734	441	843	165	1,530
Total	22,400	3,600	3,180	1,900	4,090	419	4,600

^{1/} Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

 $TABLE\ 5$ U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND CHROMIUM METAL 1/

(Metric tons)

	1995		1996	
	Jan Dec.	1st quarter	Apr.	Jan Apr.
Chromite ore:				
Not more than 40% chromic oxide:	_			
Gross weight	11,600	2,450		2,450
Chromic oxide content	4,120	810		810
More than 40% but less than 46% chromic oxide:	_			
Gross weight	14,800			
Chromic oxide content	6,110			
46% or more chromic oxide:	_			
Gross weight	226,000	10,200	28,600	38,800
Chromic oxide content	109,000	4,800	13,400	18,200
Total, all grades:				
Gross weight	253,000	12,700	28,600	41,300
Chromic oxide content	119,000	5,610	13,400	19,000
Ferrochromium:				
Low-carbon: 2/	_			
Gross weight	65,800	15,200	9,040	24,200
Chromium content	42800	9260	5360	14,600
Medium-carbon: 3/	_			
Gross weight	7,570	36		36
Chromium content	4,930	23		23
High-carbon: 4/	_			
Gross weight	422,000	93,700	53,700	147,000
Chromium content	254,000	54,600	30,500	85,200
Total, all grades:				
Gross weight	495,000	109,000	62,700	172,000
Chromium content	301,000	63,900	35,900	99,800
Chromium metal:				
Other than waste and scrap	6,930	2,510	894	3,400
Waste and scrap	109	17		17
Total, all grades	7,040	2,520	894	3,420

^{1/} Data are rounded to three significant digits; may not add to totals shown.

^{2/} Includes low-, medium-, and high-carbon ferrochromium, and ferrochromium-silicon.

^{3/} Includes wrought and unwrought and waste and scrap.

^{2/} Ferrochromium containing not more than 3% carbon.

^{3/} Ferrochromium containing more than 3% but not more than 4% carbon.

 $^{4/\}operatorname{Ferrochromium}$ containing more than 4% carbon.

TABLE 6 U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE IN APRIL 1996, BY GRADE AND BY COUNTRY 1/

		April		J	anuary - April	
	Gross			Gross		
	weight	Cr2O3	Value 2/	weight	Cr2O3	Value 2/
Country	(metric tons)	(metric tons)	(thousands)	(metric tons)	(metric tons)	(thousands)
Not more than 40% chromic						
oxide:						
Philippines				2,440	804	\$362
Venezuela				16	6	5
Total				2,450	810	367
46% or more chromic oxide:						
South Africa	28,600	13,400	\$2,580	38,800	18,200	3,370
Total, all grades:						
Philippines				2,440	804	362
South Africa	28,600	13,400	2,580	38,800	18,200	3,370
Venezuela				16	6	5
Total	28,600	13,400	2,580	41,300	19,000	3,730

^{1/} Data are rounded to three significant digits; may not add to totals shown.

^{2/} Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance and other charges incurred in bringing the merchandise to the United States.

TABLE 7 U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN APRIL 1996, BY GRADE AND BY COUNTRY 1/

	April			January - April			
	Gross	Chromium		Gross	Chromium		
	weight	content	Value 2/	weight	content	Value 2/	
Country	(metric tons)	(metric tons)	(thousands)	(metric tons)	(metric tons)	(thousands)	
High - carbon ferrochromium: 3/							
Albania				5,000	3,010	\$4,110	
China	2,920	1,900	\$1,520	7,760	4,980	5,570	
Croatia	2,300	1,440	1,380	7,220	4,500	5,200	
Estonia				8,310	5,400	5,360	
Finland	6,000	3,220	2,540	9,020	4,790	4,820	
India	- 			1,930	1,210	1,590	
Japan				18	12	25	
Kazakstan	18,300	9,880	11,300	18,300	9,880	11,300	
Russia	1,310	802	867	17,500	9,370	13,200	
South Africa	8,500	4,320	4,260	27,200	13,800	13,900	
Turkey	6,740	4,180	4,400	26,800	16,600	19,100	
United Kingdom	- ′ 	,	·	54	37	102	
Zimbabwe	7,640	4,800	4,780	18,300	11,600	14,300	
Total	53,700	30,500	31,100	147,000	85,200	98,600	
Medium-carbon ferrochromium: 4/	-	,	, , , ,	.,	,	,	
Philippines				36	23	47	
Low-carbon ferrochromium: 5/	-						
China	1,900	1,270	3,450	4,100	2,720	6,520	
Croatia				20	13	17	
Germany	325	221	678	1,860	1,300	4,050	
Japan	16	11	43	64	22	159	
Kazakstan	- 			92	63	131	
Russia	740	511	1,220	3,600	2,400	5,090	
South Africa	5,020	2,770	4,230	12,500	6,920	10,700	
United Kingdom	36	23	45	36	23	45	
Zimbabwe	1,000	557	585	1,960	1,160	1,750	
Total	9,040	5,360	10,300	24,200	14,600	28,400	
Total, all grades:	- = ,,,,,,,,	2,000	10,500	2 1,200	11,000	20,.00	
Albania	- 			5,000	3,010	4,110	
China	4,820	3,160	4,970	11,900	7,700	12,100	
Croatia	2,300	1,440	1,380	7,240	4,520	5,210	
Estonia	- 2,500	1,440		8,310	5,400	5,360	
Finland	6,000	3,220	2,540	9,020	4,790	4,820	
Germany	325	221	678	1,860	1,300	4,050	
India				1,930	1,210	1,590	
	- 16	11	43	1,930	34	1,390	
Japan Kazakstan							
Philippines	18,300	9,880	11,300	18,300 36	9,940 23	11,400	
Russia	-					19 200	
	2,050	1,310	2,090	21,100	11,800	18,300	
South Africa	13,500	7,090	8,480	39,700	20,700	24,600	
Turkey	6,740	4,180	4,400	26,800	16,600	19,100	
United Kingdom	36	23	45	90	60	148	
Zimbabwe	8,640	5,360	5,370	20,300	12,800	16,100	
Total	62,700	35,900	41,300	172,000	99,800	127,000	

^{1/} Data are rounded to three significant digits; may not add to totals shown.
2/ Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance and other charges incurred

in bringing the merchandise to the United States.

^{3/} Ferrochromium containing more than 4% carbon.

 $^{4/\}operatorname{Ferrochromium}$ containing more than 3% but not more than 4% carbon.

^{5/} Ferrochromium containing not more than 3% carbon.

TABLE 8 U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN APRIL 1996, BY GRADE AND BY COUNTRY 1/

	April		January - A	January - April		
	Gross weight	Value 2/	Gross weight	Value 2		
Country	(metric tons)	(thousands)	(metric tons)	(thousands		
Waste and scrap:						
China			17	\$103		
Other than waste and scrap:	-					
China	109	\$654	596	3,510		
France	181	1,440	531	4,040		
Germany	15	234	35	452		
Hong Kong	34	210	34	210		
India			(3/)	11		
Italy			(3/)	1		
Japan	43	537	154	2,260		
Netherlands			(3/)	2		
Portugal	2	78	2	78		
Russia	449	2,600	1,630	9,280		
Spain			1	17		
Switzerland			4	2		
Taiwan	1	20	4	57		
United Kingdom	59	562	413	3,410		
Total	894	6,330	3,400	2,340		
Total, all grades:						
China	109	654	613	3,610		
France	181	1,440	531	4,040		
Germany	15	234	35	452		
Hong Kong	34	210	34	210		
India			(3/)	11		
Italy			(3/)	1		
Japan	43	537	154	2,260		
Netherlands			(3/)	2		
Portugal	2	78	2	78		
Russia	449	2,600	1,630	9,280		
Switzerland			1	17		
Spain			4	2		
Taiwan	1	20	4	57		
United Kingdom	59	562	413	3,410		
Total	894	6,330	3,420	23,400		

^{1/} Data are rounded to three significant digits; may not add to totals shown.

^{2/} Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance and other charges incurred in bringing the merchandise into the United States.

^{3/} Less than 1/2 unit.